

UNEARTHING FANNIE BAY GAOL: ARCHIVES AND THE ARCHAEOLOGY OF WATER MANAGEMENT IN DARWIN'S FIRST PURPOSE-BUILT PRISON

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ABSTRACT

In 1998 the author conducted an archaeological excavation at Fannie Bay Gaol, Darwin (Northern Territory, Australia). This focused on features that related to early water management; specifically one of two wells dug in 1883 and one of two subterranean water tanks constructed in 1884. With the aid of early plans and other historical references the location of the well and water tank were determined with what was considered to be a reasonable degree of accuracy. Excavation found no evidence for a well. Instead a shallow pit was uncovered, possibly relating to a later above-ground water tank. The subterranean tank was successfully located and partially excavated. This revealed that the tank was probably the first of the two to be built in the Gaol, and was possibly infilled as recently as the mid-twentieth century.

KEYWORDS: Fannie Bay Gaol, Darwin, Northern Territory, Australia, nineteenth-century water management, archival information, archaeological excavation.

INTRODUCTION

Until 1979 Fannie Bay Gaol, more properly 'Her Majesty's Gaol and Labour Prison', was the main detention centre for Darwin and the surrounding region of the Northern Territory. In that year it ceased operation and prisoners were transferred to a new facility at Berrimah. The Gaol was placed under the control of the Museum and Art Gallery of the Northern Territory (then Northern Territory Museum of Arts and Sciences) and has since been maintained as a public attraction. Local residents and interstate and international tourists routinely visit the Gaol, to walk through its grounds, enter the old convict cells and other buildings, and engage with the history of the facility to obtain an appreciation of the life of inmates interned in this distinctively tropical-style jail.

However, the visual evidence forms only part of the picture of the Gaol's past. From the extant buildings visitors obtain merely a glimpse of the lifestyles of former inmates and warders. The visitor comes away with little in-depth understanding of the day-to-day lives of former residents; their living

conditions, the ethnic composition of the prison population, the food they ate, hygiene, prison discipline, and other pieces of the historic fabric of the Gaol. Historical research can uncover some of this information (e.g. Dewar 1997a, b, in press) but archival data derive from largely one source – prison officials and records. The testimony of the inmates remains largely silent, especially for the early years of the Gaol's history. This is where archaeology has a role to play. Archaeological investigation can complement and fill gaps in the archival record through recovery of the material evidence of past occupation. The information obtained by archaeology has proven to be vital in aiding public interpretation, or the 'visitor experience', of other early prisons. Examples include Hyde Park Barracks in Sydney (Emmett 1993) and Port Arthur in Tasmania (Boyer 1995). The potential that evidence uncovered by archaeology has for enhancing public presentation provides the impetus for the Fannie Bay Gaol archaeological project.

The archaeological project is a cooperative venture involving the Museum and Art Gallery of the Northern Territory and the

Northern Territory University. Excavations are run on a yearly basis to provide students from Northern Territory University with an opportunity to obtain experience in archaeological field techniques. The excavation reported here was undertaken over a 12 day period in 1998. A specific objective of this investigation was the retrieval of information relating to nineteenth-century water management practices within a tropical prison environment. This paper summarises the findings of that excavation.

BRIEF HISTORY

Fannie Bay Gaol was opened on 20 September 1883. The Gaol replaced the earlier house of detention which had been established soon after the founding of Darwin in 1869. The earlier jail was situated on the Esplanade, near the centre of Darwin, and was a very rudimentary affair, consisting of a small lock-up enclosed by a 2.5 m high galvanised iron fence (Dewar in press). The lock-up was extended in an *ad hoc* manner with the addition in the 1870s and early 1880s of extra cells and the incorporation of buildings erected for other police purposes (Troppo Architects 1996). The inadequacy of the first jail soon became apparent and plans were made as early as 1878 for the construction of a larger facility. It was, however, not until 1881 that work proceeded on the new jail on 31 hectares (77 acres) of government land in the present-day suburb of Fannie Bay (Fig. 1). Although today Fannie Bay is part of the city of Darwin, in the late nineteenth-century it was some distance north of the settlement, thereby ensuring Gaol inmates were conveniently separated from the good citizens of the town.

When it opened in 1883, 31 prisoners, consisting of 18 Chinese, 10 Aborigines and three Europeans, were moved from the old lock-up to the new facility (Dewar in press). The predominance of Chinese and Aboriginal inmates is a reflection of the demography of the Northern Territory at that time, when Europeans were very much a minority. Reliable estimates of the Aboriginal population of the nineteenth-

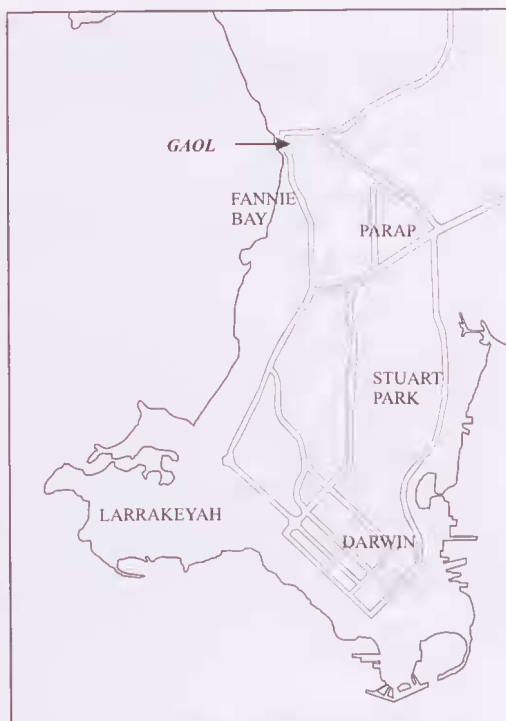


Fig. 1. Inner suburbs of present-day Darwin showing major roads and location of Fannie Bay Gaol (north to top of map).

century are unavailable, but by the late 1880s the Chinese population of the Territory stood at just over 7000, outnumbering Europeans by more than six to one (Powell 1996). Over the 96 years between the opening of the Gaol and its closure in 1979 the size of the prison population fluctuated considerably. It was largest during the years before World War Two and immediately after, when the Gaol was the only detention centre serving the Territory. During the post-war years the Gaol came to be used to house mainly short-term prisoners, with those convicted of more serious offences sent to prisons in Alice Springs or South Australia (Dewar in press).

Over its near century of use, Fannie Bay Gaol underwent major architectural change. The history of this development has been compiled by Troppo Architects (1996) in an unpublished consultancy report prepared for the Museum and Art Gallery of the Northern Territory. The following overview is based

on information contained in the report. The 1883 Gaol had three main buildings – a stone cellblock (which still exists today) and separate Gaoler's and Guards' quarters, constructed at either corner of the western perimeter fence (Fig. 2). A watchtower was built a little later, probably 1887 (Dewar in press), and a kitchen possibly later still, perhaps near the turn of the century (Troppo Architects 1996). In 1887 an infirmary was erected outside the southern fence of the Gaol. This building was constructed of roughly dressed blocks of porcellanite which were probably quarried from Doctors Gully, a few kilometres from the Gaol (National Trust 1981). The infirmary remains standing today. The Gaol was initially enclosed by a 3.6 m (12 foot) high perimeter fence made of timber and iron (Troppo Architects 1996). The maintenance of the fence was a source of constant concern to the authorities throughout the early history of the Gaol. The ravages of tropical climate and termites rendered the fence ineffective after only a few years of its construction and repairs required continual attention. Escapes were numerous and this, along with a seemingly relaxed attitude toward security, gave the Gaol in the nineteenth and early twentieth centuries an undeserved reputation as a lax institution. In fact, as Dewar (1997a) recounts, conditions were harsh, characterised by unsatisfactory and frequently overcrowded living conditions, floggings, and a daily routine of hard labour on a variety of government projects outside the Gaol.

The next major architectural change to the Gaol came in 1928 with the addition of women's cells. After the 1937 cyclone, the damaged 1887 watchtower was removed and repairs undertaken on the buildings (Troppo Architects 1996). Most of the perimeter fence may have been removed at this time as well (Troppo Architects 1996). During World War Two the Gaol was evacuated of prisoners and occupied by the Royal Australian Air Force. The airforce used the 1883 cell as an armory and store, while the infirmary was employed as a recreation centre and post office. Other buildings were converted for use as photographic rooms, a

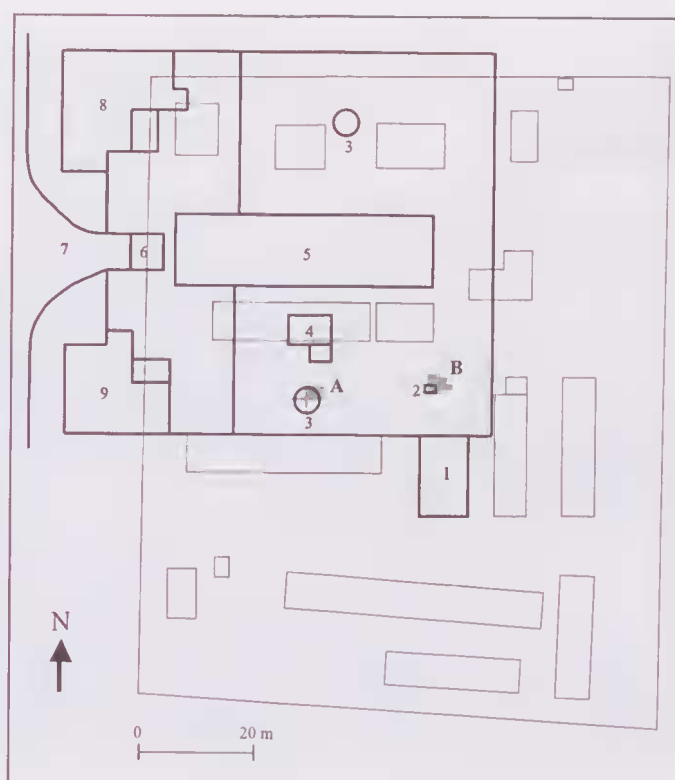


Fig. 2. Plan of Fannie Bay Gaol, with 1880s structures superimposed in heavy outline. The location of Excavation Areas A and B is shown. Key to numbers; 1 = infirmary, 2 = location of well, from historical sources, 3 = underground water tanks, 4 = kitchen, 5 = cellblock, 6 = watchtower, 7 = entrance, 8 = gaoler's residence, 9 = guards' barracks (Adapted from Troppo Architects 1996, with modification).

sick bay, and a mess (National Trust 1981). This period saw the demolition of many Gaol buildings, some of which were requisitioned to provide materials for the forces (Troppo Architects 1996).

The final stage of major modification came in the 1950s and 1960s. The original Guards' accommodation building, constructed in 1883, was demolished in the early 1950s, perhaps just prior to 1952 (Troppo Architects 1996). A galvanised iron perimeter fence was constructed to enclose a larger area of the Gaol. This was replaced by a new iron fence in 1961, which in 1966 was extended to enclose the present Gaol area. The fence was rebuilt after the 1974 cyclone. The 1950s saw the addition of new kitchen, laundry and ablution buildings, and two watchtowers which were erected at the northeast and southeast corners of the perimeter fence (Troppo Architects 1996). Additional buildings, including an isolation



Fig. 3. Photograph of subterranean tank in Area A, looking toward eastern perimeter fence. Note concrete lid, pumps, drainage channel and washstand and tub (in background). Photograph of unknown date but almost certainly within the period 1910-1930s. (Photo: Museum and Art Gallery of the Northern Territory).

block and guards' office, were constructed in the 1960s. In 1962 the 1883 Gaolcr's house was demolished to make way for the new isolation block (Troppo Architects 1996).

ARCHAEOLOGICAL INVESTIGATION

The 1998 excavation focused on two areas of the Gaol which relate to late 1800s occupation. The aim of the investigation was the uncovering of information relating to methods for provisioning the inmate population with water. Two areas were selected for investigation - a well dug in 1883, and one of two concrete subterranean water tanks constructed in 1884 as replacements for the well (Fig. 2). Both the well and water tank not only represented early attempts at water management, but also held the possibility of containing discarded general domestic refuse (food remains, clothing items, broken ceramics, utensils, etc), rubbish which would reveal information on the everyday lives of the Gaol's inhabitants.

The excavation was also undertaken in the knowledge that the Museum and Art Gallery of the Northern Territory could at

some future date give consideration to developing the features for public exhibition. Once excavated, visually enticing wells and tanks provide ideal structures for enhancing public education of the early difficulties encountered in providing a reliable and clean water supply to a confined population living in a tropical climate.

The tank investigation (Area A). Both subterranean tanks were constructed in 1884 to replace the well. The tanks were dug by prisoners and designed to contain 163,659 litres (36,000 gallons) of rainwater (Troppo Architects 1996). One was lined with concrete bricks made by prisoners, although the actual laying of bricks was undertaken by outside contractors, including two Chinese bricklayers. The other tank was lined with stone, apparently to expedite completion before the onset of the 1884 wet season. Both were originally capped with concrete lids, to which force pumps were added in 1910 (Troppo Architects 1996). The tanks were not altogether successful. From the outset they leaked and required constant maintenance. One suffered severe damage in an earthquake in June 1894. They were

nevertheless repaired and used into relatively recent times. A photograph taken of the Area A tank sometime in the early decades of the twentieth century depicts a concrete lid with attached force pump (Fig. 3). The lid and pump are also visible in a 1930s oblique aerial photograph, in which the tank is clearly shown in the corner of the prison complex (Fig. 4). Both subterranean tanks may have been filled in sometime between 1955 and 1960 (Troppo Architects 1996). Certainly they were completely infilled by the mid 1960s (Troppo Architects 1996). It is possible however that infilling postdated the time the tanks ceased to be used for water storage.

A decision was taken to excavate the southernmost of the tanks. This was made for purely practical reasons, this tank being closest to the 1883 well site (Area B), thereby facilitating coordination of student activity in the two excavation areas. Owing to limited time, it was planned to excavate only one quarter of the tank. This was done to both ascertain how the tank was constructed and to retrieve information on the material deposited inside it.

Excavation. Two 50 cm wide trenches were laid out to form a 'cross' across the depression which marked the tank's location. Removal of the layer of turf exposed the concrete edging of the rim of the tank. This was of a standardised 18 cm thickness (Fig. 5). Excavation of the northeast quadrant of the 'cross' exposed a concrete drainage channel, which in Figures 3 and 4 is evident as having extended from the tank out toward the eastern perimeter fence. The mouth of the drain was formed by cementing clay bricks to form a 28 cm wide channel. This fed into the drain itself, which was 40 cm wide at the base and 90-130 cm wide at the top. The drain was constructed of roughly poured concrete and formed a feature approximately 20 cm deep. It was clear from their downward slope that the channel and drain were intended to direct water from, not into, the tank. The drain may have served to direct water out of the tank for washing, perhaps laundry, purposes. What appear to be a washstand and tub are illustrated adjacent to the drain in Figure 3.

Excavation next proceeded down through layers of soil and sand, which had



Fig. 4. 1930s aerial photograph of the Gaol. Area A tank is visible beyond the white kitchen building, in the top left (southwest) corner of the area enclosed by the perimeter fence. Note also the above-ground water tank on a stand in the lower left (southeast) corner of the Gaol, in front of the infirmary. (Photo: Museum and Art Gallery of the Northern Territory).

been used to infill the tank (Fig. 6). This was initially undertaken in 10 cm deep spits, later increased to 20 cm spits. Six different layers were exposed beneath the turf (Fig. 7). The uppermost was a widespread layer of mixed dark brown soil with small porcellanite nodules throughout (Layer 1). Immediately beneath the topsoil was a grey to black fine-textured soil (Layer 2). A charcoal lens was present within this layer. At the western end of the section was an intrusive layer of dark brown to grey soil (Layer 3), the lower part of which was differentiated by the presence of small stones. Beneath this layer were two layers of beach sand. One, restricted to the eastern part of the section and abutting the tank wall, consisted of light brown coarse sand (Layer 4). More extensive was a layer of very fine white beach sand (Layer 5), which partially overlaid Layer 4. Layer 5 was distinguished by the presence of a vertical feature, tapering from 25 cm to 10 cm and extending to the base of the excavation. This may have represented a posthole or similar depression. The sand of Layer 5 had evidently been poured into the abandoned tank and in so doing had infilled this depression or hole. The depression had been dug into the underlying layer (Layer 6), which consisted of dark brown soil with loosely placed porcellanite pieces. Layer 6 was similar in colour and texture to the Layer 1 topsoil and was probably redeposited topsoil mixed with pieces of extracted basement porcellanite.

The excavation ceased at a depth of approximately 55 cm below the lip of the

tank. At this depth the soil was noticeably damp, especially in the northeast part of the excavation. A spade hole sunk in this area reached water a further 50 cm down. The presence of water at approximately 100 cm below the top of the tank indicated that the tank still retains water, even during the dry season. The source of the water was probably the automatic sprinkler system, which is employed to maintain the lawns inside the Gaol. The presence of water precluded further excavation to identify the depth of the tank, which must form a major objective of any future investigation. This will require shutting off the sprinkler system, or use of a pump to empty the tank.

Artefacts. An assortment of artefacts was recovered from the tank fill. These included four brown beer bottle shards; clear, green and black bottle glass; a piece of stippled window glass; a tin can, paint(?) can lid and tin can fragments; copper electrical wire; a 23 cm long iron spike; a concrete brick; two pieces of concrete (the largest measuring 18 x 16 x 3 cm); a glazed piece of roof tile or heavy ceramic; one piece of white porcelain; a fragment of asbestos sheet; and numerous nails, including roofing nails. Almost all artefacts came from Layer 6. Exceptions were 700 gm of assorted nails, along with some glass, from the interface of the turf and Layer 1; four pieces of glass from Layer 3 (two fused together); and two pieces of blue/green glass from Layer 5. The presence in Layer 6 of a number of demonstrably mid-twentieth century artefacts indicates a relatively recent date for this period of



Fig. 5. Photograph of Area A depicting edge of water tank, and concrete drainage channel (in foreground).



Fig. 6. Photograph of stratified fill uncovered inside the Area A water tank.

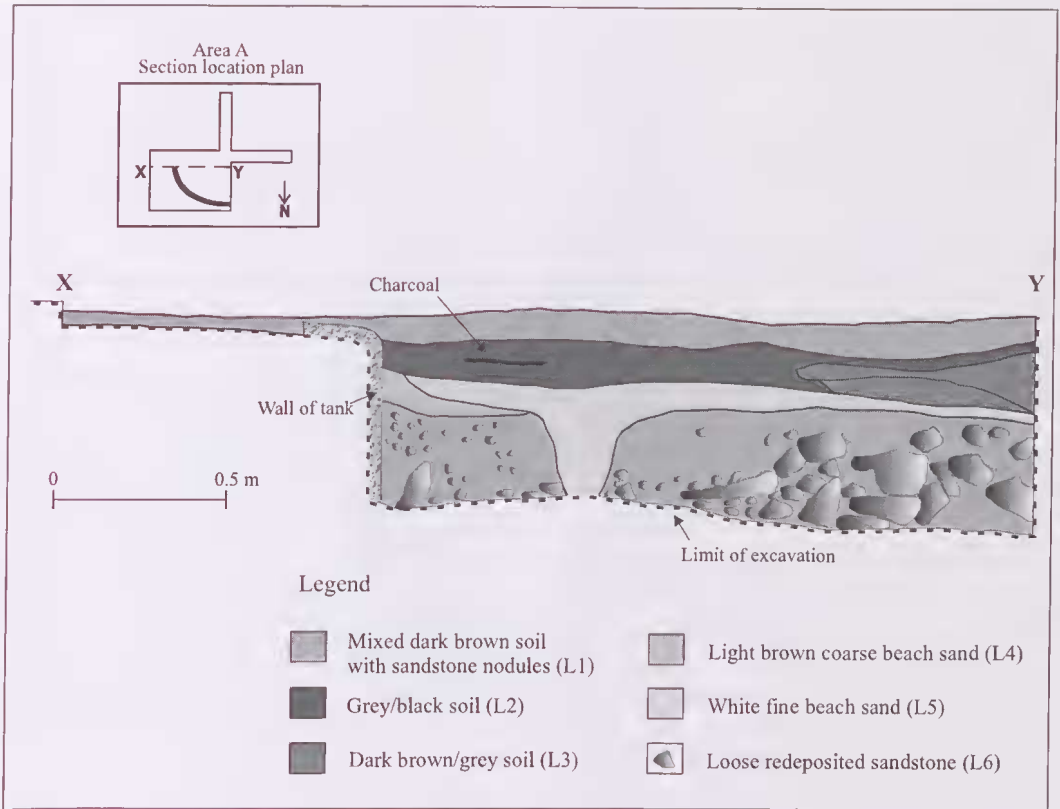


Fig. 7. Area A section depicting stratigraphy of fill inside the water tank.

infilling. However, as the excavation did not reach the base of the tank, earlier episodes of infilling may yet await discovery.

In addition to human-made artefacts, the excavation also revealed shells and stones that had been transported from elsewhere. Shells included gastropods and bivalves, including *Anadara* and four pieces of pearlshell (the largest 8 x 4 cm). Stones were mainly water-rolled pieces, the largest weighing 1,217 gm. Some bivalve shell and stone was recovered from the turf/Layer 1 interface, but the remainder derived from Layers 5 and 6, but predominantly Layer 6.

Discussion. The exposed section of the water tank was filled in over a number of episodes, beginning probably no earlier than the 1940s. It is possible that much of this infilling relates to the period of prison redevelopment which took place between 1955 and 1965. During this decade, a laundry building was constructed immediately south of the tank (1957-8), and the kitchen and

dining areas to the north were extended (1963-4) (Troppo Architects 1996). The nearby abandoned tank would have been a convenient disposal place for excavated soil and building refuse. The fine beach sand discovered inside the tank may have been utilised in the preparation of concrete for building, such as for the construction of the platform foundation for the adjacent laundry. The association of shells and water-rolled stones with this sand is likely to be fortuitous. The abandoned tank may have also been used at one time as a convenient incinerator. This can be inferred from the presence in Layer 2 of a dense lens of charcoal and numerous charcoal pieces, as well as the discovery of fused glass in Layer 3.

One unanswered question relates to the fate of the concrete lid which originally capped the tank. One possibility, perhaps the most likely scenario, is that it was broken up when the decision was taken to use the tank as a refuse tip. A number of pieces of

concrete were found in Layer 6, with the largest piece, referred to above, presenting a good candidate for a structural item. Excavation toward to the base of the tank may uncover the remains of the lid, perhaps along with the associated force pump.

On the evidence from the excavation it seems that the Area A tank was the subterranean tank mentioned in historical records as constructed of concrete bricks. This would therefore be the first tank to be constructed inside the Gaol. The tank in the northern section of the Gaol will probably be found to be the one lined with stones.

The well investigation (Area B). Two wells were dug in 1883 to supply the Gaol with drinking water. One was situated in a paddock outside the eastern perimeter fence. The other was excavated in the southeast area of the Gaol, immediately north of the location of the 1887 infirmary. The wells were found to be inadequate, with the water soon becoming unsuitable for drinking. The quality of the water was blamed for disease and general ill-health in the prison population (Troppo Architects 1996). Within 12 months of the Gaol opening, plans were made for the construction of subterranean water tanks, described above.

The location of the internal well has been given by Troppo Architects, on the basis of nineteenth and early twentieth century records, as approximately 10 m in front of the northwest corner of the infirmary. Today there is no surface evidence of the well's location. Presumably it was filled in at the time the water tanks came into use in 1884, or soon after. However, in their report Troppo Architects (1996) describe the well as in existence until 1944, although presumably by this time it had been capped. On this point it is noteworthy that in the nineteenth and early twentieth centuries wells were quickly infilled after they fell into disuse, to prevent the breeding of disease-carrying mosquitoes. An open and abandoned well inside a prison would certainly pose a serious health problem, as well as a safety risk.

Excavation. The purpose of the Area B excavation was to locate the well and excavate out a portion of its contents

(bearing in mind that many wells around Darwin were in excess of 10 m deep). Preliminary probing with a steel drain-layer's probe failed to locate any evidence of a well. The next stage involved laying out a 20 cm wide by 4.5 m long exploratory trench. This was subsequently expanded by the excavation of three extensions, to the east, northwest, and southwest (Fig. 8). In total, 10.2 m² was opened up by excavation. The investigation proceeded down to between 15 cm and 70 cm below datum (which was approximately 5 cm above the turf). It soon became evident that Area B had been extensively modified by historically recent trench digging. This was associated with the laying of iron water pipes and plastic conduit of the type used to house electrical cables (similar, perhaps the same, conduit was also uncovered in part of one of the excavation trenches of Area A). The pipes and electrical conduit were not marked on plans consulted before the start of the investigation, and upon discovery of the conduit, the NT Power and Water Authority was contacted and an official subsequently carried out an inspection.

This evidence of relatively recent activity in Area B complicated interpretation of earlier activity. Nevertheless, a distinct stratigraphic profile was uncovered. This consisted of turf and topsoil (Layer 1) overlying a light brown coarse sandy gravel. In places, the sandy gravel contained scattered marine shells. The layer appeared to represent a redeposited beach sand, similar to Layer 4 in Area A. In places, chips of porcellanite were present in the sandy gravel. In the Southwest Extension, large pieces of mortar rested on and within the sand (Fig. 8). Over most of the eastern part of Area B the sandy gravel was sandwiched between topsoil and natural subsoil of red/orange compacted gravel, which rested on consolidated porcellanite bedrock (approximately 70 cm below datum). However, near the centre of Area B, a layer of grey/black soil (Layer 2) was present between the topsoil (Layer 1) and sandy gravel (Layer 3). Approximately one third of the extent of the Layer 2 grey/black soil layer was exposed, indicating it covered an area of around 3 m by 2 m (Fig. 8).

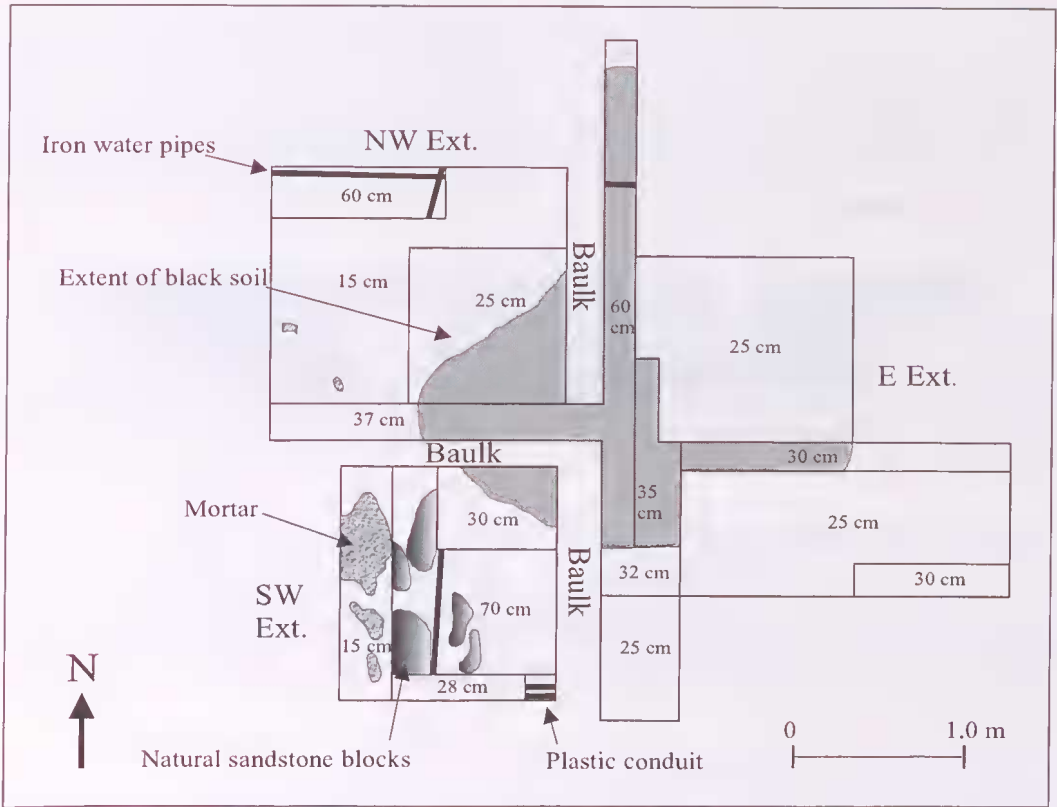


Fig. 8. Excavation Area B showing location of features and extent of black soil. Numbers refer to excavation depth below datum.

The depth of Layer 2 was ascertained by excavating the original 20 cm wide exploratory trench to a depth of 60 cm. This revealed that the Layer 3 light brown sandy gravel was discontinuous beneath Layer 2, and therefore did not extend over the entire excavation (Fig. 9). Beneath Layers 2 and 3 a 20-35 cm deep layer of black greasy soil containing pockets of ash and gravel was discovered. This black greasy deposit (Layer 4) had been produced as a result of the Gaol's former inhabitants burning organic material, including wood. Underlying Layer 4 was natural red/orange gravel. It was evident that a shallow pit had been excavated into the natural basal layer to contain the burnt organic material. The southern edge of the pit was vertically cut and originally lined with corrugated iron nailed to wooden batons. Pieces of iron were discovered still adhering to the face, along

with nails and wood fragments. The northern edge was less distinct. It may have been cut into a brown soil (Layer 5) which extended northward in the section (Fig. 9). However, no evidence of corrugated iron lining was discovered here.

Artefacts. Surprisingly few artefacts were present in Area B. From the pit feature itself, which would perhaps be the most likely place to find artefacts, only 26 nails and two pieces of corrugated iron were recovered, all associated with retaining the southern edge of the pit. The nails were not diagnostically early (Varman 1987) and probably date to the twentieth century. Two possible glass marble fragments were found in the Northwest and Southwest Extensions at between 20 cm and 35 cm below datum. The topsoil revealed broken concrete (seven pieces), two pieces of brown bottle glass, a plastic trouser button, and a piece of electrical cord.

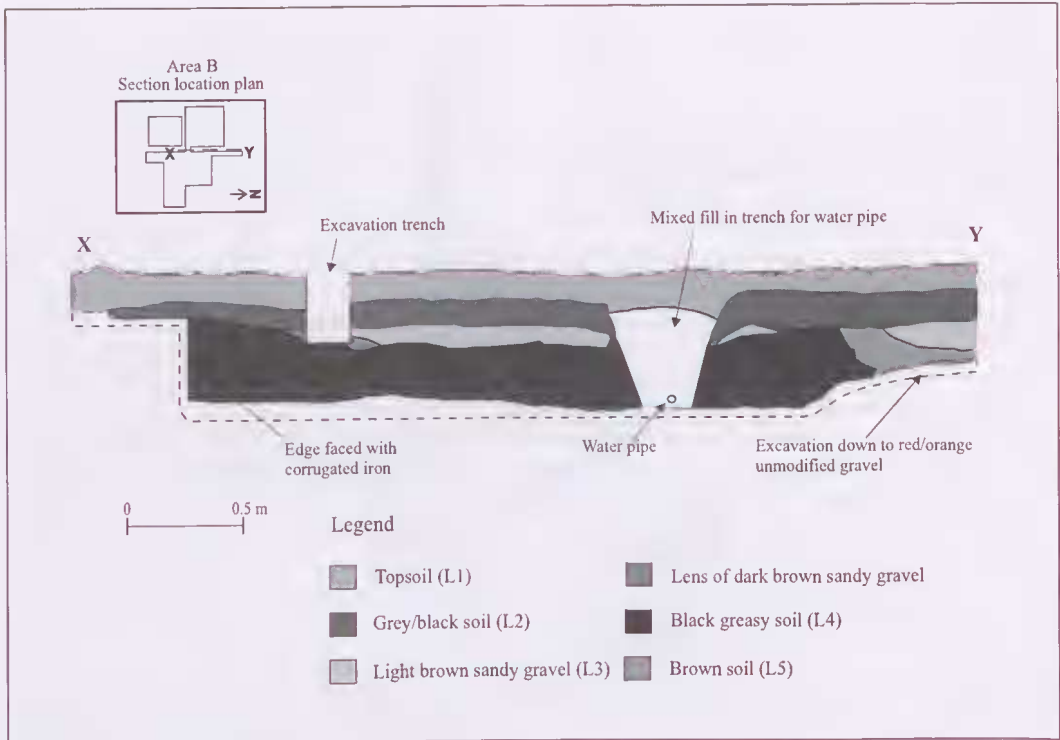


Fig. 9. Area B section depicting soil layers and pit feature.

Discussion. The primary objective of the excavation of Area B, the identification of the 1883 well, was not achieved. This was in spite of placing the excavation on the site of the well, as identified from nineteenth-century records. During the course of the investigation some consideration was given to the possibility that the shallow pit may have been purposefully excavated around the mouth of the well when the latter was dug, perhaps to prevent loose debris falling inside. However, the trench placed through the centre of the pit failed to uncover any indication of a well. Probing with the drain-layer's probe also failed to detect anything but solid porcellanite beneath the black soil. One possible explanation is that the pit was associated with a water tank stand, which the 1930s aerial photograph shows to be immediately north of the infirmary in the same general location as the Area B excavation (Fig. 4). The excavation may therefore have been unwittingly placed on the tank stand site. This raises the question

of the location of the well. In both Figures 3 and 4 a pipe can be discerned protruding from the side of the water tank and then turning to extend vertically down to ground level, presumably into an underground cistern or well. When combined with the negative evidence from the Area B excavation, this provides a clue as to the possible location of the well. If the Gaol's first well is at the point where the tank pipe entered the ground, then it is situated only a few metres north of the excavation, probably beneath a present-day concrete path. Further archaeological investigation will be required to determine if this is indeed the case.

CONCLUSION

The 1998 excavation season was successful in locating one of the 1884 subterranean water tanks. We are now in possession of information on its construction and size that was not previously known. The

investigation was also able to identify the tank as the first one constructed in the Gaol. Artefacts recovered from the tank indicate that at least one episode of infilling was carried out during recent times. This may postdate the time the tank fell into disuse; information on this awaits complete excavation of the tank. The tank was found to be in a good state of preservation and, once emptied, would make an ideal feature for interpretation and public display.

The excavation of Area B provides an illustration of how archival information can be misleading when used to attempt to precisely locate early historical features. Excavation of the area which archival information indicated to be the location of the 1883 well failed to uncover evidence of a well. It is possible the excavation was placed south of the well's actual location. The shallow pit uncovered in Area B may relate to an elevated water tank constructed some time after the well ceased to be used as a regular source of water, or may represent an even more recent feature, perhaps a rubbish disposal pit or a 'flaming fury' latrine.

In conclusion, results of the 1998 excavation demonstrate that physical evidence of the early history of Fannie Bay Gaol will be found beneath the ground surface, as well as in the extant buildings visible today on the site. Some of the hidden evidence, as with the well, will not tie in with opinions and knowledge formed from archival research. Other evidence, such as the subterranean tank, will neatly mesh with information derived from archival research. The investigation of water storage features at Fannie Bay Gaol serves to reinforce the observation that, irrespective of whether archaeology builds upon or causes us to query the written historical record, an understanding of the total history of the Gaol will be achieved only through analysis of both the written word and the material remains of past occupation.

REFERENCES

- Boyer, P. 1995. An interpretation of Port Arthur. In Sullivan, S. (ed.) *Cultural conservation: towards a national approach*. Pp 483-495. Australian National Publishing Service: Canberra.
- Dewar, M. 1997a. 'Hard labour' or 'a salubrious retreat'? the relationship between gaol and community in Palmerston 1869-1910. *Journal of Northern Territory History* 8: 1-12.
- Dewar, M. 1997b. Putting the Chinese back into Fannie Bay Gaol. In: Walters, I., Dewar, M., Harlow S., Healy J., Murray, D. and Russell B. (eds) *Unlocking Museums. Proceedings of the Fourth National Conference of Museums Australia Inc.* Pp. 146-152. Museums Australia: Darwin.
- Dewar, M. in press. *Inside out: a history of Fannie Bay Gaol*. Northern Territory University Press: Darwin.
- Emmett, P. 1993. Convictism: Hyde Park Barracks and the antipodean gulag. *Historic Environment* 10(2/3): 26-30.
- National Trust 1981. Fannie Bay Gaol. Unpublished report by the National Trust (NT Branch): Darwin.
- Powell, A. 1996. *Far country. A short history of the Northern Territory*. Melbourne University Press: Victoria.
- Tropo Architects 1996. Fannie Bay Gaol. A structural history and data base. Vol. 1. Unpublished report to the Museum and Art Gallery of the Northern Territory: Darwin.
- Varman, R.V.J. 1987. The nail as a criterion for the dating of building and building sites (late 18th century to 1900). In: Birmingham, J. and Bairstow, D. (eds) *Papers in Australian Historical Archaeology*. Pp 104-112. Australian Society for Historical Archaeology: Sydney.

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